

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An integrated device comprising a high-voltage resistor integrated in a semiconductor material body wherein said high-voltage resistor has a vertical current flow structure, wherein said high-voltage resistor is formed by a portion of said semiconductor material body extending between a first and a second surface of the semiconductor material body, and delimited at least partially by an insulation region extending from said first surface towards said second surface of said semiconductor material body.

2. (Original) An integrated device according to claim 1 wherein said high-voltage resistor has conductivity of the same type as that of said semiconductor material body.

3. (Cancelled) An integrated device according to claim 1 wherein said high-voltage resistor is formed by a portion of said semiconductor material body extending between a first and a second surface of the semiconductor material body, and delimited at least partially by an insulation region extending from said first surface towards said second surface of said semiconductor material body.

4. (Currently Amended) An integrated device according to claim 3-1 wherein said insulation region has a closed shape in plan view.

5. (Currently Amended) An integrated device according to claim 3-1 wherein said insulation region is formed entirely of isolating material.

6. (Currently Amended) An integrated device according to claim 31, further comprising a first and a second region having conductivity opposite that of said semiconductor material body, and arranged on opposite sides of said insulation region.

7. (Original) An integrated device according to claim 1, further comprising first and second electronic devices formed in said semiconductor material body on opposite sides of said insulation region.

8.-19. (Cancelled)

20. (Original) An integrated device, comprising:

a semiconductor body having a surface;

a doped semiconductor region extending longitudinally into the semiconductor body from the surface, the semiconductor region being a resistor extending transversely with respect to the surface; and

an insulating region extending longitudinally into the semiconductor body from the surface, the insulating region laterally surrounding the semiconductor region.

21. (Original) The device of claim 20 wherein the insulating region is open at a bottom portion such that the semiconductor region is contiguous with the semiconductor body.

22. (Original) The device of claim 20 wherein the semiconductor region has a rectangular cross-section and the insulating region has a rectangular frame shape.

23. (Original) The device of claim 20 wherein the insulating region is completely of electrically isolating material.

24. (Original) The device of claim 20 wherein the insulating region includes insulating walls made of electrically insulating material and a conductive filler that is laterally surrounded by the insulating walls.

25. (Original) The device of claim 24 wherein the semiconductor region includes an upper region of a first conductivity type; a middle region of a second conductivity type, opposite to the first conductivity type; and a lower region of the first conductivity type, the middle region being positioned between the upper and lower regions such that a transistor is formed that includes the conductive filler as a gate, the upper region as a first source/drain, and the lower region as a second source/drain.

26. (Original) The device of claim 20, further comprising first and second semiconductor regions having conductivity opposite to a conductivity of the semiconductor material body, and arranged immediately adjacent to opposite sides of the insulation region.

27. (Original) The device of claim 20 wherein the semiconductor region includes an upper region adjacent to the surface of the semiconductor body and a lower region positioned below the upper region, the upper region being doped at a higher doping level compared to the lower region.

28. (Original) The device of claim 20 wherein the semiconductor region includes an upper region adjacent to the surface of the semiconductor body and a lower region positioned below the upper region, the upper region having a conductivity type opposite to a conductivity type of the lower region, thereby forming a diode.

29. (Currently Amended) The device of claim 1 wherein the resistor is a doped semiconductor region of the body that is laterally surrounded by ~~an~~ the insulating region, which extends ~~extending~~ longitudinally into the body from ~~a~~ the first surface of the body, the

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insulating region including insulating walls made of electrically insulating material and a
conductive filler that is laterally surrounded by the insulating walls.

30. (Previously Added) The device of claim 29 wherein the semiconductor region includes an upper region of a first conductivity type; a middle region of a second conductivity type, opposite to the first conductivity type; and a lower region of the first conductivity type, the middle region being positioned between the upper and lower regions such that a transistor is formed that includes the conductive filler as a gate, the upper region as a first source/drain, and the lower region as a second source/drain.
